

fails to provide proof of registration for study for each of those semesters, the award will be forfeited.

## **APPLICATION**

**Due: Friday, March 6<sup>th</sup> 2015**

### **AMERICAN CONCRETE INSTITUTE – MISSOURI CHAPTER LUKE AND BILLIE SNELL UNDERGRADUATE SCHOLARSHIP AWARD**

#### **PERSONAL INFORMATION**

|                                          |                                 |
|------------------------------------------|---------------------------------|
| NAME: Virginia Gahl Trauth               |                                 |
| ADDRESS: 116 Dene Dr. Columbia, MO 65201 |                                 |
| TELEPHONE: (573) 823-9172                | EMAIL: vgtmt9@mail.missouri.edu |

#### **EDUCATION**

| INSTITUTION                 | DATES ATTENDED       | CREDIT HOURS | GRADUATION DATE<br>(If Applicable) |
|-----------------------------|----------------------|--------------|------------------------------------|
| Helias Catholic High School | August 2008-May 2012 | 23           | May 2012                           |
| University of Missouri      | August 2012-present  | 117          | May 2016 (expected)                |
|                             |                      |              |                                    |
|                             |                      |              |                                    |

#### **COLLEGE STUDY**

|                                                                                                                          |  |                                      |                    |
|--------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------|--------------------|
| Institution: University of Missouri                                                                                      |  | Location: Columbia, MO               |                    |
| Date of Admission: Spring 2012                                                                                           |  | Period of Study: August 2012-present |                    |
| Degree Expected: BS                                                                                                      |  | Major Civil Engineering              | Minor Arch Studies |
| Previous MO-ACI scholarship winner? Yes <input type="checkbox"/> , No <input checked="" type="checkbox"/> If yes, when?: |  |                                      |                    |

- 1. Describe how you developed an interest in concrete. What aspects of concrete do you find most interesting? (Answers cannot exceed allotted space)**

I first developed an interest in concrete when I heard about the concrete canoe team and decided to join. This interest continued and grew as I took a more active role in the concrete canoe team, began doing undergraduate research focusing on a type of concrete construction (flat plate puncture shear failure), and took my first class that covered concrete components, uses, and mix designs. I find the versatility of concrete to be its most interesting aspect. Concrete can be incredibly strong and heavy or it can be light enough to float in water. It can be used for building everything from a building's foundations, to the actual structure of a building, to a bridge, to a canoe and I think the fact that one material can do all of these things is very exciting.

**2. What is your experience with concrete? Include any practical experience gained through work, school, or personal activities.**

I have worked as an undergraduate researcher, working on a research project focused on an aspect of concrete construction since January of 2014. On this job I have poured and finished large slabs of concrete, built formwork for the concrete, cut and tied rebar for the concrete, and tested the concrete. I also worked as a research technician over the summer on a different project. For this project I built formwork, cut and tied rebar, and poured and finished a large concrete slab. I am president of the concrete canoe team so I regularly work on mix designs for lightweight concrete. Once the designs are finished I make the concrete with my team and finally test the cured cylinders. In school I have taken a civil engineering materials class where we made mix designs and concrete and I am currently taking a reinforced concrete design class.

**3. What courses relating to concrete have you taken or do you intend to take while in college? Include courses where only a portion of the curriculum is concrete-related.**

I have taken or am taking two classes in particular that are concrete related. The first class I took relating to concrete was civil engineering materials. In this class we covered a number of civil engineering materials, but we spent a large portion of the class discussing and learning about concrete. We learned about the fresh and hardened properties of concrete and we got hands on work in the lab. In the lab portion of the class we made a mix design, made that mix, cured the mix, and finally tested the concrete mix. As a final project in this class we were challenged to create an artistic or unusual application of concrete. I chose to make a heat resistant concrete fire pit. The research on materials and how to go about making the mix were very interesting and along with correct batching and placing, led to a successful project.

I am currently taking reinforced concrete design. Although we are still in the thick of this class I have begun to learn how civil engineers design reinforced concrete beams and the why they do things a certain way. I hope to take additional concrete and design classes in the future as well.

**4. What careers are you interested in pursuing after you graduate? How do you feel that your chosen coursework will help you achieve your goals?**

I am interested in pursuing a career as a civil engineer after I graduate. The coursework I have taken thus far and will take will help me achieve this goal by teaching me what a civil engineer needs to know about designing properly and about the materials a civil engineer uses in design on a daily basis.

## REFERENCES

List the names of two people from whom you have requested recommendations be email or mailed to the ACI-MO Chapter at the address below.

| NAME        | TITLE               | EMPLOYER               | ADDRESS                                   |
|-------------|---------------------|------------------------|-------------------------------------------|
| Sarah Orton | Associate Professor | University of Missouri | E2503 Lafferre Hall<br>Columbia, MO 65211 |
| Hani Salim  | Associate Professor | University of Missouri | E2509 Lafferre Hall<br>Columbia, MO 65211 |

*I certify that the information contained in this application is true and that I have answered all of the questions to the best of my ability. I agree that I will notify the ACI Missouri Chapter immediately when my educational program is interrupted or changed in any manner that may jeopardize the intent of the award. I further agree that I will accept the award only as long as I successfully pursue the program of study I have described above and for which the reward was made.*

Signature: Virginia Hahl Trauth Date: 3/4/15

**RETURN COMPLETED APPLICATION PACKAGE BY FRIDAY, MARCH 6<sup>TH</sup> 2015 TO:**

**dane.shaw@jacobs.com (PREFERED SUBMISSION METHOD)**

or

**Dane M. Shaw  
Jacobs Engineering  
501 N. Broadway  
Saint Louis, MO 63102**

**Applicants are encouraged to submit applications electronically. Please make every attempt to submit in one email. Letters of reference should be sent directly either electronically or by mail.**